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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/015,749	12/17/2001	Kazuhiro Sonoda	35.C16029	2844

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FITZPATRICK CELLA HARPER & SCINTO  
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NEW YORK, NY 10112

EXAMINER

VILLECCO, JOHN M

ART UNIT	PAPER NUMBER
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2612

DATE MAILED: 03/11/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

**Office Action Summary**

Application No.

10/015,749

Applicant(s)

SONODA ET AL.

Examiner

John M. Villecco

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 02 January 2004.
- 2a) ☒ This action is FINAL. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 24-27 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 24-27 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 17 December 2001 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some \* c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date g.
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_\_.

## DETAILED ACTION II

### *Response to Arguments*

1. Applicant has cancelled previously pending claims 1-23 and has added claims 24-27, thus necessitating a new search and additional consideration.
2. Please see below for the rejection pertaining to the newly added claims.

### *Claim Rejections - 35 USC § 103*

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. **Claims 24-27 are rejected under 35 U.S.C. 103(a) as being unpatentable over Muramatsu (Japanese Publ. No. 2000-152085 A) in view of Sato (U.S. Patent No. 6,337,713) and further in view of Meyers (U.S. Patent No. 6,137,535).**

5. Regarding *claim 24*, Muramatsu discloses an image pickup apparatus which is integrated on a substrate. More specifically, the apparatus includes a pixel area comprised of pixel blocks 101, 102, 103, and 104 wherein each of the pixel blocks is inherently comprised of a plurality of pixels. The plurality of pixel blocks makes up the pixel area. The pixel area is integrated on a substrate (24). Each pixel block has scanning circuitry for reading out the signals from the pixels, including address decoders (111, 112, 113, and 114), low-scan shift registers (121,122,123,124), column-scan shift registers (131,132,133,134), and low drivers

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(141,142,143,144). Furthermore the pixel area includes A/D converters (181, 182, 183, 184) and noise control circuits (151, 152, 153, 154) which act as the plurality of processing circuits disposed on opposite sides of the pixel area. The A/D converters and noise control circuits perform predetermined processing on the signal output from the pixel. See Figure 6.

Muramatsu, however, fails to explicitly state the use of amplifiers for amplifying the signal output from the imaging device. Sato, on the other hand, discloses a plurality of pixel areas (A, B, C, D) each of which outputs a signal to an amplifier (128A, 128B, 128C, and 128D) in common with the pixel area. The use of an amplifier allows for a stronger image signal output from the imager which makes it easier to correct the signal. Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to amplify the signals from the pixel area so that it is easier to perform signal processing later on.

Furthermore, neither Muramatsu nor Sato specifically disclose a lens integrated into one unit. While Sato does disclose using a lens to focus the incoming light onto the CCD, Sato fails to disclose that the lens and image pickup element are integrated into one unit. Meyers, on the other hand, discloses a compact digital camera with segmented fields of view. More specifically, Meyers teaches an image sensor formed by subgroups of photodetectors (22). Each subgroup of photodetectors (22) has a lens (12) associated with it. See Figures 1a and 1b and column 4, lines 27-62. By forming lenses over the subgroups of photodetectors the impinging light is directed and focused onto the imaging element. Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to include a lens for each of the pixel areas of Muramatsu so that light is directed and focused onto the face of the pixel areas.

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6. Regarding *claim 25*, Sato discloses digital signal processing circuit (110) for processing the image signal and a memory (120) for storing an image signal from the processing circuit (110).

7. As for *claim 26*, Muramatsu discloses A/D converters (181, 182, 183, 184), noise control circuits (151, 152, 153, 154), and clock control circuits (161, 162, 163, 164) which act as the plurality of processing circuits disposed on opposite sides of the pixel area.

8. With regard to *claim 27*, Sato discloses digital signal processing circuit (110) for processing the image signal and a memory (120) for storing an image signal from the processing circuit (110).

9. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the date of this final action.

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Any response to this final action should be mailed to:

Box AF  
Commissioner of Patents and Trademarks  
Washington, D.C. 20231

or faxed to:

(703) 308-6306, (for formal communications; please mark "**EXPEDITED PROCEDURE**"; for informal or draft communications, please label "**PROPOSED**" or "**DRAFT**")

Hand-delivered responses should be brought to Crystal Park II, 2121 Crystal Drive, Arlington, VA., Sixth Floor (Receptionist).


Any inquiry concerning this communication or earlier communications from the examiner should be directed to John M. Villecco whose telephone number is (703) 305-1460. The examiner can normally be reached on Monday through Thursday from 7:00 am to 5:30 pm EST.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Wendy Garber, can be reached on (703) 305-4929. The fax phone number for the organization where this application or proceeding is assigned is (703) 872-9306.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the customer service desk whose telephone number is (703) 306-0377.



John M. Villecco  
3/2/04



WENDY R. GARBER  
SUPERVISORY PATENT EXAMINER  
TECHNOLOGY CENTER 2600